REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application. Claims 1 through 22 are currently pending in the application. Claims 16 through 22 have been withdrawn from consideration. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the above amendments and remarks set forth below.

Election / Restriction

The Examiner has noted that the present application includes two inventions, Invention I, which is related to an overmold portion, and Invention II, which is related to a hand held power tool. The Examiner has entered a Restriction Requirement on the basis that Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship.

Applicant hereby affirms the provisional election to prosecute Claims 1 through 15, which are directed to Invention I.

The Examiner has also entered an election requirement, noting that the present application includes a patentably distinct species, which is presumed to include a hand held power tool or portions thereof. The Examiner has noted that Claims 1 and 9 are generic.

Applicant hereby elects to prosecute the species of Claims 1 through 9 and 11 through 15. Applicant submits that each of these claims is generic.

Notwithstanding the above-entered elections, the Examiner is requested to reconsider the Election/Restriction Requirement since the claims are so closely related that maintaining them in the same Application would not cause undue hardship for the Examiner. In this regard, Section 803 of the Manual of Patent Examining Procedures states:

> If the search and examination of an entire application can be made without serious burden, the Examiner must examine it on the merits, even though it includes claims to distinct or independent inventions.

Applicant notes that the art cited herein by the Examiner includes art that is related to hand held power tools (i.e., the non-elected invention). Accordingly, Applicant respectfully submits that the situation does not appear as though the examination of Inventions I and II be a "serious burden". Accordingly, the Examiner is respectfully requested to reconsider and withdraw the Election/Restriction Requirement.

Claim Rejections Based on 35 U.S.C. §102

Claims 1 through 15 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,738,177 to Schell et al. In the alternative, Claims 1 and 9 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,100,114 to Milkovich et al. These rejections are respectfully traversed.

Rejections based on Schell

A. Background of the Schell reference

Applicant initially notes that the Schell reference appears to disclose an electric, torque-controlled power tool having a housing 12, an overmolded portion 14 that is formed onto the housing 12, a transmission 42, a clutch 50 and a decoupling sensor 56. The transmission 42 is housed in the housing 12 and is coupled to the clutch 50, which serves to limit the output torque of the power tool. The clutch 50 includes a driven cam disk 164 that moves forwardly toward the nose of the tool when the transmission is transmitting therethrough a predetermined torque output; the driven cam disk strikes a portion of the decoupling sensor 56 to change the state of the decoupling sensor 56 and thus initiate the braking of the electric motor.

B. Claims 1 through 8

Applicant notes the following excerpt from the Schell reference:

> Referring now to FIGS. 4-7, interconnection of end cap 34 with motor 32 will be described in greater detail. After motor 32 is dropped into position in housing 12 and is in operative connection with transmission 42, end cap 34 is secured to the rear of housing 12. As shown, a rubber ring 76 is inserted over a rearward end 80 of motor 32. Rubber ring 76 is compressed between an end cap interior cylindrical projection 82 and end 80 of motor 32 to provide a tight engagement between motor 32 and end cap 34 and thus allows end cap 34 once secured to housing 12, to bias motor 32 towards front nose 20 of housing 12 against transmission 42 and ensure proper alignment of motor 32 as described above. The end of projection 82 which interfaces with rubber ring 76 is provided with a plurality of teeth which engage rubber ring 76 to prohibit rotation of motor 32 and the subsequent loading on pins 72. The alignment of motor 32 is provided by rearward end 80 of motor 32 being piloted by cylindrical projection 82.

Schell reference at Col. 7, lines 8 through 25.

From the foregoing, Applicant respectfully submits that the Schell reference does not teach or suggest Applicant's invention. More specifically, the Schell reference does not teach or suggest an overmold portion that is coupled to a first structure and which defines a seal portion that is configured to engage a second structure so as to form a seal between the first and second structures. The seal in the Schell reference is a conventional and discretely formed O-ring. Furthermore, the screws 86 of the Schell reference do not form any part of its overmold 14.

In view of the above remarks, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of Claim 1 under 35 U.S.C. §102(b).

Applicant notes that Claims 2 through 8 are dependent from Claim 1 and as such, respectfully submits that these claims are in condition for allowance for the reasons set forth for Claim 1, above.

C. Claims 9 through 15

The decoupling sensor 56 of the Schell reference includes a membrane switch 280, which is coupled to the housing 12, a block 384, which slides on the housing 12, and a plunger 382 that slides on the block 384. Projections 390 of the overmold 14 extend through the housing 12 and engage the membrane switch 280 to thereby fixedly

couple the membrane switch 280 to the housing 12. Movement of the block 384 relative to the housing 12

> allows plunger 382 to be placed a predefined distance from the axially moving driven cam disk 164. This predefined distance can be defined by plunger features or by a gage block (not shown) that is used during assembly of the tool. Because this adjustment is critical to the operation of the tool, spindle 58 is biased rearwardly in housing 12 by a pair of thrust washers 381 which sandwich a wavy spring washer 383. Washers 381 and spring washer 383 are disposed between a flange bearing 385 which is secured within housing 12 and a snap ring 387 which is located within a groove machined into spindle 58. Thus, any axial movement of spindle 58 and thus driving and driven disks 142 and 164 respectively is eliminated allowing a more accurate adjustment of sensor block 384 and plunger 382 relative to driven disk 164. The adjustment of the prespecified distance between plunger 382 and driven disk 164 should be accomplished while ensuring the proper location of plunger 382 and coil spring 386. The predefined distance is shown graphically shown in FIG. 18. The gaging block should position plunger 382 such that membrane switch 380 is opened upon achieving axial displacement at point "A." This axial displacement represents an ideal situation where the signal is set at the preset torque level. In practice, however, tool tolerances must be considered. For example, if the gaging block positions sensor block 384 and plunger 382 to open membrane switch 380 at position A, mechanical tolerances in the system may actually allow membrane switch 380 to open prior to reaching point A. This will result in an under-torqued fastener due to premature braking. Therefore, it is desirable for the gaging block to position the sensor block and plunger near the mid-point of zone B.

Schell at Col. 19, line 67 through Col. 20, line 30. Accordingly, it is imperative to the operation of the Schell power tool that both the membrane switch 380 and block 384 be maintained in a fixed and non-movable position relative to the housing 12 during the operation of the power tool so as to render the output of tool repeatable.

Stated another way, if any portion of the decoupling sensor 56 (e.g., the membrane switch 380) were to be resiliently coupled to the housing 12 rather than fixedly coupled to the housing 12, as has been suggested by the Examiner, the precise relationship between the position of the membrane switch 380, the plunger 382 and the driven cam disk 164 would be lost, and the power tool would not operate in a reliable manner. Furthermore, the output of the decoupling sensor 56 would tend to bounce as driven cam disk 164 strikes the plunger 384. Accordingly, Applicant respectfully submits

that the overmold 14 of the Schell reference does not form an isolator portion that is configured to dampen vibrations that are transmitted between two structures.

As the Examiner knows, a finding of inherency is appropriate where the prior art device necessarily includes the limitations of an apparatus claim. *In re King*, 801 F.2d 1324, 231 USPQ 136, 138 (Fed. Cir. 1986). The Federal Circuit has stated:

> To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference and that it would be so recognized by persons of ordinary skill. *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 20 USPQ 2d 1746, 1749 (Fed. Cir. 1991).

In this regard, the CCPA has added that "'[i]nherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.'" *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (C.C.P.A. 1981) (quoting *Hansgirg v. Kemmer*, 102 F.2d 212, 214, 40 USPQ 665, 667 (C.C.P.A. 1939) (emphasis in original).

Applicant respectfully submits that the Schell reference does not inherently anticipate Claim 9 of the subject application as the Examiner has not produced evidence that makes "clear that the missing descriptive matter is necessarily present in the thing described in the reference and that it would be so recognized by persons of ordinary skill." Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of Claim 9 under 35 U.S.C. §102(b).

Applicant notes that Claims 10 through 15 are dependent from Claim 9 and as such, respectfully submits that these claims are in condition for allowance for the reasons set forth for Claim 9, above.

Rejections based on Milkovich

The Milkovich reference appears to relate to the joining of a semiconductor chip 32 to a substrate 42. An adhesive material 18 is initially employed to adhere the semiconductor ship 32 to the substrate 42 and thereafter solder bumps are reflowed to form encapsulated solder connections 44. An optional edge sealant 46 or what Milkovich has referred to as an "overmold" 48 may be added to the assembly after the reflow operation. Notably, the only example of a suitable material for the edge sealant or "overmold" is Hysol FP4550 from the Dexter Corporation.

Applicant has enclosed in Appendix 1 a Technical Data Sheet from the Loctite Corporation for Hysol FP4550 taken from the Loctite Corporation website. Applicant notes that Hysol FP4550 is a liquid epoxy encapsulant which is not suitable for overmolding as is conventionally understood. Applicant respectfully submits that the Milkovich reference utilizes the term "overmolding" in an unconventional manner and only to illustrate the difference between the edge seal, which is illustrated in Figure 4 of the Milkovich reference, and complete encapsulation, which is illustrated in Figure 5 of the Milkovich reference. With regard to the embodiment of Figure 5, Applicant notes that the Hysol FP4550 material is applied only after the chip 32 has been assembled to the substrate 43 and the solder bumps have been reflowed to form the encapsulated solder connections 44.

Furthermore, Hysol FP4550 does not appear to be a resilient material nor does it appear to be capable of dampening vibrations between the chip 32 and substrate 42 or the adhesive 18, since the chip 32 and the substrate 42 are fixedly coupled together via the encapsulated solder connections 44. Accordingly, Applicant respectfully submits that the Milkovich reference does not teach or suggest the inventions of Claims 1 or 9.

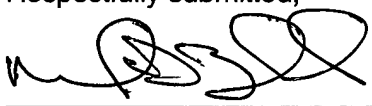
In view of the above, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of Claim 1 and 9 under 35 U.S.C. §102(b).

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding office action, and as such, the present application is in condition for allowance. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned attorney at (248) 641-1600.

Prompt and favorable consideration of this amendment is respectfully requested.

Respectfully submitted,



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Technical Data Sheet

HYSOL® FP4450

Electronics Product July 2002

PRODUCT DESCRIPTION

Hysol® FP4450 is high purity, low stress liquid encapsulant with good moisture resistance and an extended working life. It is designed for protection of bare semiconductor devices. Pressure pot performance on live devices is up to 500 hours with no failures, depending upon device and package type. This material is designed for temperature cycling ranges up to -65°C to 150°C. Pot life or working life has been extended to approximately 3 days. This liquid epoxy exhibits relatively high flow. A cavity or a potting dam is required for flow control. Hysol® FP4450 may be suitable for bare chip protection in a variety of advanced packages such as IC memory cards, chip carriers, hybrid circuits, chip-on-board, multi-chip modules, ball grid arrays and pin grid arrays. The high temperature performance and excellent resistance to chemicals, moisture and handling damage, are also advantageous for automotive applications.

TYPICAL APPLICATIONS

Semiconductor encapsulant

PROPERTIES OF UNCURED MATERIAL

Color	Black
Filler Content, %, (ITM3A)	73
Specific Gravity, (ITM9A)	1.77
Shelf Life @-40°C (-40°F), months	9
	Typical Value
Viscosity @ 25°C, (77°F) (ITM2A) Brookfield RVF Spindle 7, Speed 20, Cp	43,900

PHYSICAL PROPERTIES, CURED MATERIAL

Color	Black
Coefficient of Thermal Expansion, in/in/°C (ITM65B) (40°C-120°C)	18×10^{-6}
Glass Transition, (Tg),°C,(ITM65B)	162
Extractable Ionic Content (ITM107B)	
Chloride (Cl-), ppm	5
Sodium (Na+), ppm	1
Potassium (K+), ppm	2

HANDLING

Pot Life @ 25°C, 77°F, days, (200 gram mass),(ITM101),	3
Gel Time @ 121°C, (250°F), minutes (ITM10N)	12

Frozen packages must be completely thawed before use. Warm at room temperature until no longer cool to the touch (normally 20-60 minutes). For best results, FP4450 should be dispensed onto a substrate, warmed to approximately 80°C . This will help minimize air entrapment. Do not thaw in an oven. Elevated temperatures reduce working life. Do not store above –40°C.

GENERAL INFORMATION

For safe handling information on this product, consult th Material Safety Data Sheet, (MSDS).

CURE SCHEDULE

Recommended Cure 30 minutes @ 125°C plus 90 minutes @ 165°C

Designed to be used with packages which are affected by higher levels of stress. This cure will give optimum properties.

Alternate Cure 1 hour @ 165°C

Designed for robust packages which are not sensitive to stress.

Use suggested cure schedules as general guidelines; other cure schedules may yield satisfactory results.

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Loctite Corporation specifically disclaims all warranties expressed or impli d, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of L ctite Corporation's products. Loctite Corporation specifically disclaims any liability for consequential or incid ntal damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Loctite Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

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